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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,909	11/21/2003	Bulent M. Basol	NT-306-US	8943

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EXAMINER

DANG, PHUC T

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EF

Office Action Summary	Application No.	Applicant(s)	
	10/719,909	BASOL, BULENT M.	
	Examiner	Art Unit	
	PHUC T. DANG	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on election filed on February 7, 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 13-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 041504.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. Applicant's election filed on February 7, 2005 has been acknowledged.

In election, Applicants elect Group I (claims 1-12) for examination and withdrawn Group II (claims 13-22).

Claims 1-22 are currently still pending in the application.

Oath/Declaration

2. The oath/declaration filed on November 21, 2003 is acceptable.

Information Disclosure Statement

3. The office acknowledges receipt of the following items from the applicant:

Information Disclosure Statement (IDS) filed on April 15, 2004.

Drawings

4. The drawings of Figs. 1A-1C should be designated by a legend such as -- Prior Art -- because only that which is old is illustrated. See MPEP 608.02(g).

Specification

5. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmori et al., hereinafter "Ohmori" (U.S. Patent No. 6,506,103 B1).

Regarding claim 1, Ohmori discloses an ELID centerless grinding apparatus comprising:

contacting the overburden conductive material with a porous conductive member (11, Fig. 3) insulatively coupled to an electrode (14, Fig. 3);

applying a voltage (16, Fig. 3) between the porous conductive member (11, Fig. 3) and the electrode (14, Fig. 3); and

establishing relative motion between the porous conductive member insulatively coupled to the electrode and the workpiece (1, Fig. 3) to electrochemically remove the overburden conductive material on the surface of the workpiece [col. 5, lines 2-8].

Ohmori discloses the structures of the claimed invention as discussed above, but does not disclose a process for electrochemically removing overburden conductive material formed over cavities having cavity conductive material therein on a surface of a workpiece.

However, a process for electrochemically removing overburden conductive material formed over cavities having cavity conductive material therein on a surface of a workpiece is a preamble of the claim which is not belong to the body claim. Thus, it would have been obvious to one having ordinary skilled in the art at the time the invention was made to modify the above

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preamble teaching by reference's Ohmori for a purpose of improving the workpiece rotating more smoothly.

Regarding claim 2, Ohmori the step of contacting includes contacting less than 10% of an area of the workpiece surface [col. 1, lines 28-32].

Regarding claim 3, Ohmori discloses a further step of comprising maintaining a gap between the electrode and the porous conductive member [col. 4, lines 30-32].

Regarding claim 4, Ohmori discloses a further step of comprising bridging the gap between the electrode (14, Fig. 2) and the porous conductive member (11; Fig. 2).

Regarding claims 6, Ohmori discloses the step of contacting the overburden conductive material includes laying an area of the porous conductive member on the overburden conductive material [col. 2, lines 55-62].

Regarding claims 7-9, Ohmori discloses the step of establishing relative motion includes sweeping the porous conductive member across the overburden conductive material and across substantially an entire surface of the workpiece and includes moving the surface of the overburden conductive material to sweep the porous conductive member across the overburden conductive material [col. 6, lines 15-20].

7. Ohmori discloses the claimed invention except for the process parameters as claimed in claim 5. However, the selection of the claimed process parameters would have been obvious to one having ordinary skill in the art at the time the invention was made to improve a process for removing overburden conductive material formed over cavities, since it is well settle that when

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the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Allowable Subject Matter

8. The following is a statement of reason for the indication of allowable subject matter:

Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the Prior Art made of record discloses comprising self-limiting the electrochemical removal of the overburden conductive material after exposing the cavity conductive material as cited in claim 10 and the step of self-limiting includes contacting the porous conductive member with an underlying barrier layer as cited in claim 11 and the step of self-limiting includes sensing a reduced current drop between the porous conductive member and the electrode as cited in claim 12.

Conclusion

9. **Applicants are advised to cancel the non-elected claims of Group II (claims 13-22) in response to the next Office action if the application is considered to be allowed.**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuc T. Dang whose telephone number is (571) 272-1776. The examiner can normally be reached on 8:00 am-5:00 pm.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization

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where this application or proceeding is assigned are 703-872-9306 for regular communications and After Final communications.

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Phuc T. Dang

PD

A handwritten signature in black ink, appearing to read 'Phuc T. Dang', with a long, sweeping horizontal line extending to the right.

Primary Examiner

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